Ogulei, David

From: Garnett, Kim

Sent: Wednesday, October 08, 2014 10:25 AM

To: Ogulei, David Subject: FW: Question

From: Andrea Geiger [mailto:andreag@cooperenvironmental.com]

Sent: Monday, September 16, 2013 3:53 PM

To: Garnett, Kim **Cc:** 'John Cooper' **Subject:** Question

Hello Kim,

Please accept my apologies for the delay in our response. I have filled in the blanks below as well as offered a little bit of extra information, just in case. It's always difficult to give a price without a few qualifiers on instruments like these...

The first costs for purchase/installation/certification/training of a MM CEMS are anticipated to be approximately \$365,000 - \$400,000*. The instrument runs about \$260,000 of that cost. Annual costs will likely be about \$25,000.**

*Factors such as transport length, remote control/polling options, sampling interval (i.e. shorter sampling intervals require more tape), and installation complexities will have an impact on the overall initial budget for MM CEMS.

**Annual costs depend largely on sampling interval. For a 30 minute sampling interval, filter tape costs run about \$19,500/year. 15-minute sampling intervals double that amount annually. In addition, we recommend that companies budget for an annual X-ray tube replacement and re-calibration (appx \$5-6K). Annual labor generally requires one technician approximately 8-10 hours per month for tape changes and general operation and maintenance tasks.

I hope this helps. Please don't hesitate to contact me if you have questions.

Best Regards,

Andrea Geiger

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